WO 2006/060642 PCT/US2005/043592

I claim:

1. A reflector for a luminaire comprising a shaped wall having a plurality of longitudinal main reflecting prisms and a plurality of transition reflecting prisms interleaved with said main reflecting prisms wherein the peak of each transition prism transitions into the valley of a respective main prism in a transition zone that is significantly shorter than the length of said main prism.

- 2. A reflector according to claim 1 wherein said main reflecting prisms and said transition prisms are configured to provide internal reflection of light emanating from an interior portion of said luminaire.
- 3. A reflector according to claim 1 wherein the shapes of said transition reflecting prisms outside of said transition zone are essentially the same as the shapes of said main reflecting prisms.
- 4. A reflector according to claim 1 wherein said shaped wall is rotationally symmetric about a longitudinal axis of said luminaire.
- 5. A reflector according to claim 1 wherein the length of said transition zone is less than about ten percent of the length of said shaped wall.
- 6. A reflector according to claim 1 wherein the length of said transition zone is less than about five percent of the length of said shaped wall.
- 7. A reflector according to claim 1 wherein said transition zone comprises a step.
- 8. A reflector according to claim 1 wherein in a cross section passing though a longitudinal axis of said shaped wall, the shape of said transition zone is one of linear, parabolic, or stepped.
- 9. A reflector according to claim 1 wherein in a cross section passing though a longitudinal axis of said shaped wall, the shape of said transition zone is circular.
- 10. A reflector according to claim 9 wherein the radius of curvature of said transition zone is about three inches.
- 11. A method of making a reflector comprising the steps of providing a shaped wall, forming in said shaped wall a first set of main prisms extending along substantially the entire length of said mold, forming in said shaped wall

WO 2006/060642 PCT/US2005/043592

a set of transition prisms similar in shape to said main prisms and interleaved with said main prisms, said transition prisms extending along less than the length of said shaped wall, and forming in said shaped wall a transition zone contiguous with said transition prisms, the length of said transition zone being substantially less than the length of said second set of linear prisms.

- 12. A method according to claim 11 further comprising the step of providing a mold having the configuration of said shaped wall and wherein said steps of forming said prisms and said transition zone comprise steps of forming said prisms and transition zone in said shaped wall and then making a reflector by using said mold.
- 13. A method according to claim 12 wherein the steps of forming said main and transition prisms in said shaped wall comprise using a single cutting tool or multiple cutting tools of similar shape.
- 14. A method according to claim 13 wherein the step of forming said transition zone comprises moving a said cutting tool such that a peak of a transition prism merges with a valley between adjacent main prisms.